

What Is Claimed Is:

1. A method for manufacturing a foam-molded article by molding between molds a parison with a foam layer formed by extruding an expandable molten resin composition, obtained by melt-kneading a polyethylene resin and a physical foaming agent, to an area of low pressure from a die, wherein the polyethylene resin is selected from at least any of the following I), II), and III), and wherein the apparent density of the foam layer in the foam-molded article is about 0.04 to 0.3 g/cm<sup>3</sup>.

I) A resin comprising 40 to 85 wt% polyethylene (A) with a density that is more than 0.94 g/cm<sup>3</sup> and not more than 0.97 g/cm<sup>3</sup>, and a melt flow rate of 0.1 to 20 g/10 minutes; and 15 to 60 wt% polyethylene (B) with a density of 0.89 to 0.94 g/cm<sup>3</sup>, a melt flow rate of 0.2 to 20 g/10 minutes, and a melt tension of not less than 2 cN (provided that the total of polyethylene (A) and (B) is 100 wt%).

II) A resin which has at least one endothermic peak having a top temperature of not less than 125°C on a DSC curve obtained by differential scanning calorimetry, and in which the ratio of the heat quantity of the endothermic peak(s) at not less than 125°C with respect to the total heat quantity of the endothermic peak(s) is 50 to 95%, melt flow rate is 0.2 to 25 g/10 minutes, and melt tension is not less than 1.5 cN.

III) A resin which comprises 40 to 85 wt% polyethylene (A) having a density more than 0.94 g/cm<sup>3</sup> and not more than 0.97 g/cm<sup>3</sup>, and a melt flow rate of 0.1 to 20 g/10 minutes; and 15 to 60 wt% polyethylene (B) having a density of 0.89 to 0.94 g/cm<sup>3</sup>, a melt flow rate of 0.2 to 20 g/10 minutes, and a

melt tension of not less than 2 cN (provided that the total of polyethylene (A) and (B) is 100 wt%); which has at least one endothermic peak having a top temperature of not less than 125°C on a DSC curve obtained by differential scanning calorimetry; and in which the ratio of the heat quantity of the endothermic peak(s) at not less than 125°C with respect to the total heat quantity of the endothermic peak(s) is 50 to 95%, melt flow rate is 0.2 to 25 g/10 minutes, and melt tension is not less than 1.5 cN.

2. The method for manufacturing a foam-molded article according to claim 1, wherein the physical foaming agent contains 50 to 100 mol% of carbon dioxide.

3. The method for manufacturing a foam-molded article according to claim 1, wherein the parison is a multilayer parison having a thermoplastic resin layer on the inside and/or on the outside of the foam layer.

4. A foam-molded article with a foam layer produced by the manufacturing method according to claim 1, wherein the foam layer of the article has an apparent density of about 0.04 to 0.3 g/cm<sup>3</sup> and a thickness of 2 to 25 mm, and the foam-molded article has an internal hollow portion.

5. A foam-molded article with a foam layer produced by the manufacturing method according to claim 1, wherein the foam layer of the article has an apparent density of about 0.04 to 0.3 g/cm<sup>3</sup> and a thickness of 2 to 25 mm, and the foam-molded article does not have an internal hollow portion.

6. The foam-molded article according to claim 4 or 5, wherein the closed cell ratio of the foam layer of the article is not less than 70%.

7. The foam-molded article according to claim 4 or 5,  
5 wherein the average cell diameter of the foam layer of the article is 0.1 to 5 mm.

8. The foam-molded article according to claim 4, wherein the foam-molded article with an internal hollow portion has a cylindrical shape.

10 9. The foam-molded article according to claim 4, wherein the foam-molded article with an internal hollow portion has a plate shape.

10. The foam-molded article according to claim 5, wherein the foam-molded article without an internal hollow portion has a  
15 plate shape.

11. The foam-molded article according to claim 9 or 10, having a thermoplastic resin layer on the outside of the foam layer of the article.